

## Chapter 15.38

### TREE CONSERVATION AND REPLACEMENT

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#### **15.38.010 Short title—Purpose and intent.**

The short title of this chapter is the “City of Locust Grove Tree Conservation and Replacement Ordinance.” The city deems it necessary and desirable in the interest of public health, safety and welfare to enact an ordinance for the conservation, planting and replacement of trees and to prevent the indiscriminate removal of trees in the city without denying the reasonable use and enjoyment of real property. The importance of trees is recognized for their shade, cooling, noise and wind reduction, soil erosion prevention, oxygen production, dust filtration, carbon dioxide absorption, aesthetic and economic enhancement of all real property, and their contribution to the general well being and quality of life of the citizens of Locust Grove. Consistent with the expressed purpose of this chapter, all persons shall make reasonable efforts to preserve and retain certain existing, self-supporting trees as defined herein. It is also the intent of this chapter that all applicable sites within the city maintain or obtain a minimum tree density, as defined and explained herein. (Ord. 04-01-001 § 2 (part))

ORDINANCE 04-01-001

TO AMEND TITLE 15 OF THE CITY OF LOCUST GROVE CODE OF ORDINANCES WHICH PROVIDES FOR BUILDING AND CONSTRUCTION REGULATIONS; TO ADOPT A NEW CHAPTER 15.38 ENTITLED "CHAPTER 15.38 - TREE CONSERVATION AND REPLACEMENT;" TO REPEAL INCONSISTENT PROVISIONS; TO PROVIDE AN EFFECTIVE DATE; AND FOR OTHER PURPOSES

THE COUNCIL OF THE CITY OF LOCUST GROVE HEREBY ORDAINS

**SECTION 1. New Chapter Created.** Title 15 of the Code of Ordinances of the City of Locust Grove is hereby amended by inserting Chapter 15.38 entitled "Chapter 15.38 - Tree Conservation and Replacement;" which shall read as follows:

**Chapter 15.38 - Tree Conservation and Replacement**

**SECTION 2. New Code Sections Created.** Chapter 15.42 of the Code of Ordinances of the City of Locust Grove is hereby amended by inserting Sections 15.38.010 through 15.38.170 as follows:

**Section 15.38.010. Short Title; Purpose and Intent.**

A. The short title of this Chapter is the "City of Locust Grove Tree Conservation and Replacement Ordinance." The City deems it necessary and desirable in the interest of public health, safety and welfare to enact an ordinance for the conservation, planting and replacement of trees and to prevent the indiscriminate removal of trees in the City without denying the reasonable use and enjoyment of real property. The importance of trees is recognized for their shade, cooling, noise and wind reduction, soil erosion prevention, oxygen production, dust filtration, carbon dioxide absorption, aesthetic and economic enhancement of all real property, and their contribution to the general well being and quality of life of the citizens of Locust Grove. Consistent with the expressed purpose of this Chapter, all persons shall make reasonable efforts to preserve and retain certain existing, self-supporting trees as defined herein. It is also the intent of this Chapter that all applicable sites within the City maintain or obtain a minimum tree density, as defined and explained herein.

**Section 15.38.020 Definitions.**

For purposes of this Chapter, the following terms shall have the meaning prescribed, unless the context clearly indicates otherwise. All other terms shall be accorded their common meaning.

"Basal area." The cross-sectional area expressed in square inches, of a tree trunk at Diameter Breast Height (DBH) expressed herein in terms of "units" per acre.

"Board of Appeals." The Locust Grove City Council.

"Buffer." An area required to remain undisturbed pursuant to the Subdivision Regulations, the Zoning Ordinance, a condition of Zoning or this Chapter.

"Building Department." Henry County Building Department.

"Caliper." A standard of trunk measurement for understory or replacement trees. Caliper inches are measured at the height of six inches (6") above the ground for trees up to and including four inch (4") caliper and twelve inches (12") above the ground for trees larger than four inch (4") caliper.

"City." The City of Locust Grove, Georgia or its designee.

"City Arborist." The person or his or her designee who shall administer and enforce the provisions of this Chapter. Until a City Arborist has been chosen by the City Council or when the position becomes vacant, the City Arborist shall be the City Manager.

"Conifer tree." Any tree with needle leaves and a woody cone fruit including, but not limited to, pine, juniper and cedar species.

"Construction area." That area outside the tree save area that is used for any of the following purposes: (a) public or private right-of-ways; (b) driveways, not to exceed twenty feet (20') in width; (c) utility easements, not to exceed ten feet (10') in width unless otherwise required by law or the utility provider; (d) sewer and stormwater easements not to exceed forty feet (40') in width; (e) parking facilities; (e) lot building areas.

"Critical root zone." The minimum area beneath a tree which must be left undisturbed in order to preserve a sufficient root mass to give a tree a reasonable chance of survival. The critical root zone (CRZ) will typically be represented by a concentric circle centering on the tree's trunk with a radius equal in feet to one and three-tenths (1.3) times the number of inches of the trunk diameter. Example: The CRZ radius of a 20-inch diameter tree is twenty-six feet (26').

"Density factor." A unit of measurement used to prescribe the calculated tree coverage on a site.

"Developer." The person, persons, or entity making application for land disturbance permits, building permits, or certificates of occupancy for any development activity.

"Development activity." Any alteration of the natural environment which requires the approval of a development or site plan and issuance of a land disturbance permit. By way of illustration but not limitation, development activity shall also include the "thinning" or removal of trees from land in conjunction with a forest management program, the removal or destruction of trees incidental to the development of land or to the marketing of land for development, the removal or destruction of trees in conjunction with any grading activity, including the removal or filling (stockpiling) of soil, and logging or the removal of trees not in conjunction with an ongoing forest management program. Nothing in this definition shall be deemed to require or authorize the issuance of a permit for any activity described herein.

"Development Plan Review Department." The Henry County Development Plan Review Department.

"Diameter Breast-Height (DBH)." The standard measure of tree size for trees existing on a site. The diameter of the tree trunk is measured at a height of four and one-half feet (4 ½') above the ground. If a tree splits into multiple trunks below four and one-half feet (4 ½'), measure the trunk at its most narrow point beneath the split.

"Grading activity." Altering ground surfaces to specified elevations, dimensions, and/or slopes; this includes stripping, cutting, filling, stockpiling and shaping or any combination thereof and shall include the land in its cut or filled condition.

"Land disturbance permit." A permit issued by the City that authorizes development activity, and includes, but is not limited to, a soil erosion permit, clearing and grubbing permit, land disturbance permit or building permit.

"Lot building area." That area of a lot, set aside for construction of the primary structure, not including the front, side and rear setbacks, as established by the City Zoning Ordinance. The lot building area may be expanded into said setbacks by no more than ten feet (10') from the foundation of a structure where such foundation is located on or within five feet (5') of the setback line so as to minimize construction impacts on the tree save area, unless a variance has been granted for any such setback.

"Non-development activity." Any alteration of the natural environment, which does not require development or site plan approval, but which would include the proposed removal or destruction of any tree(s). Any removal of trees that constitutes development activity as that term is herein defined shall not constitute non-development activity.

"Overstory tree." Trees that compose the top layer or canopy of vegetation and will generally reach a mature height of greater than forty feet (40').

"Pervious surface." All that area of land that can be landscaped or planted, allows natural passage through by water and is not covered by man-made materials or structures such as building or paving.

"Planning and Zoning Department." The Henry County Planning and Zoning Department.

"Plantable area." The pervious surface area (expressed in square feet) available for the preservation or planting of trees on a single-family subdivision lot. Plantable Area shall not include that portion of the lot that is covered by buildings and structure.

"Registered landscape architect." A person registered in the State of Georgia as being a landscape architect.

"Semi-Pervious." Hardscape, aggregate or porous paver that allows at least fifty percent (50%) of surface water to pass through the man made material and into the underlying soil.

"Single-family residential." Any residential-agricultural district (RA); single-family residential district including R-1, R-2, and R-3; two-family residential district (RD); mobile home development district (RMH); type of planned development districts containing such uses; or other single family districts that may be adopted. Single-family residential does not include multi-family districts.

"Specimen tree." Any tree which qualifies in accordance with Appendix C for special consideration for preservation due to its size, type, condition, location or historical significance as determined by the City Arborist.

"Timber harvest." Harvesting of timber from sites as a timber management activity as part of a demonstrated ongoing agricultural land use. Timber harvesting shall be regulated pursuant to Appendix D of this Chapter.

"Tree." Any living, self-supporting woody or fibrous plant which

normally obtains a diameter breast height of at least three (3) inches, and typically has one (1) main stem or trunk and many branches.

"Tree planting list." The recommended species of trees listed in Appendix A.

"Tree removal or removal of trees." Any act which causes a tree to die within two (2) years after commission of the act, including but not limited to damage inflicted upon the root system in the critical root zone or trunk as the result of:

- (1) The improper use of machinery on the trees;
- (2) The storage of materials in or around the trees;
- (3) Soil compaction;
- (4) Altering the natural grade to expose the roots or to cover the tree's root system with more than four (4) inches of soil;
- (5) Causing the infection or infestation of the tree by pests, fungus or harmful bacteria;
- ~~(6) Pruning judged to be excessive by the City Arborist or not in accordance with the standard set forth by the International Society of Arboriculture (ISA);~~
- (7) Paving with concrete, asphalt or other impervious surface within such proximity as to be harmful to the tree or its root system; and
- (8) Application of herbicides or defoliants to any tree without first obtaining a permit.

"Tree save area." The area exclusive of construction areas designated for the purpose of meeting tree density requirements, saving natural trees, preventing soil disturbance, and/or preserving natural buffers.

"Zoning districts." Those areas as defined in the Zoning Ordinance and shown on the Zoning Map.

"Understory." Those trees that grow beneath the overstory, and will generally reach a mature height of under forty feet (40').

#### **Section 15.38.030. Applicability.**

The terms and provisions of this Chapter shall apply to all property within the corporate limits. The provisions of this Chapter shall not limit the applicability of the buffering and open space provisions of the Zoning Ordinance. The terms and provisions of this Chapter shall be consistent with any requirements imposed by state law or by the Georgia Department of Transportation in connection with any state-owned or maintained right-of-way. This ordinance shall not apply to any development activities for which land disturbance permits have already been issued.

**Section 15.38.040. Tree Board.**

The Mayor and each City Council member shall appoint one (1) member to a seven (7) member Tree Board. This Tree Board should be the same body as provided under Chapter 12.12 of the Code of Ordinances for the City of Locust Grove.

A. The Tree Board shall give advice to the City Council based on an annual reevaluation of experience under the Chapter, provide leadership in the development of understanding of the objectives and methods of the tree program, and assist the City Arborist in the development and maintenance of technical specifications and guidelines.

B. The Tree Board shall produce and maintain a list of proposed changes to the kinds and species of trees described in the tree planting list attached as Appendix A to this Chapter. Any such changes may be adopted by resolution of the City Council and may be changed from time to time by resolution of the City Council. Upon adoption of the resolution, the changes shall become a part of this Chapter.

C. The Tree Board should enlist technical advisors in the fields of land development, landscape architecture and horticulture or related professions.

**Section 15.38.050. General Tree Conservation.**

Every property owner, occupant, or developer of property shall be responsible for the normal care of trees located on such property.

A. Willful injury or disfigurement of any tree growing within the City shall be a violation of this Chapter.

B. No person shall:

1. Attach any sign, notice or other object to any tree or fasten any wires, cables, nails or screws to any tree in a



manner that could prove harmful to the tree, except as necessary in conjunction with activities in the public interest or as part of construction of a tree house absent the intent to kill or seriously disfigure the tree.

2. Pour any material near or around any tree which could be harmful to the tree.

3. Cause or encourage any unnecessary fire or burning near or around any tree.

4. Construct a concrete, asphalt, brick or gravel sidewalk, significantly compact the soil, place fill material, or create other impervious or semi-impervious surfaces around any tree so as to cut off air, light or water from the roots of the tree so as to adversely impact the tree's root system.

5. Pile building material or equipment around any tree so as to cause growth threatening injury thereto.

6. Deny routine maintenance, watering and reasonable arboricultural care to existing and newly established trees as may be required as a result of activities taking place under the provisions of this Chapter.

**Section 15.38.060. Exemptions; Approval Letter Required for Non-Development Activity.**

The following shall be exempt from the provisions of this Chapter:

1. The removal of trees from an owner-occupied, single-family lot, not any way associated with development activities;

2. The removal of trees from horticultural properties such as farms, nurseries or orchards. This exception shall not be interpreted to include timber-harvesting incidental to development of the land;

3. The necessary removal of trees within dedicated utility easements;

4. The removal of trees on public right-of-ways (and adjacent areas within the construction limits of right-of-ways) conducted by, on behalf of, or any activity pursuant to work to be dedicated to, a federal, state, county, municipal or other governmental agency in pursuance of its lawful activities or functions in the construction or improvement of public right-of-ways;



5. The removal of trees from lakes, detention ponds, and drainage easements; or

6. The removal of any tree which has become or threatens to become a danger to human life or property.

7. Notwithstanding the foregoing, all reasonable efforts should be made to save specimen trees.

**Section 15.38.070. General Requirements for Active Development.**

A. Prior to the issuance of a land disturbance permit for the applicable development or phase of development the following general steps shall be satisfied.

1. Developer shall prepare an integrated site plan and tree survey as prescribed under Section 15.38.080.

2. Developer shall submit the integrated site plan and tree survey to the City Arborist who will determine which specimen trees will be preserved. This determination should be made after consultation with Developer. All specimen trees not preserved shall be replaced in accordance with subsection 15.38.090.D. Developer shall also submit to the City Arborist the administration fee required under Section 15.38.140 and an aerial photograph of the entire area upon which development activities are to take place. (Such photographs may be obtained from Henry County Administration.)

3. Developer shall mark all specimen trees to be preserved with a ring of blue colored water-based paint around the base of their trunks. Developer shall cordon off all tree save areas from construction areas with heavy millimeter plastic tape, a minimum of four (4) inches wide with dark letters on a bright background reading "Tree Save Area Do Not Enter" or equivalent signage on a continuous, durable restraint. Such signage shall be installed no less than three feet (3') and no more than five feet (5') from the ground and shall remain in functioning condition until the construction proximate to the tree save area is complete. Thereafter, Developer shall remove and dispose of said signage.

4. Unless preexisting, Developer shall plant and maintain a dense vegetative buffer along the perimeter of the development or phase of the development in which grading activity may occur. The width of said buffer shall be at least as wide as that required under the City zoning ordinance. In addition, the area in which grading activity may occur shall be visually screened from public roads by at least a fifty foot (50') buffer. Planting of said

buffer shall begin no later than thirty (30) days after tree removal or grading activities have begun and shall be complete no later than ninety (90) days thereafter.

5. City Arborist shall inspect the development site for compliance with the above requirements. Where tree trunks or critical root zones are in jeopardy of being damaged by equipment, the City Arborist shall require the Developer to provide meaningful protection of such aspects of trees, such as strap 2-inch by 4-inch boards around tree trunks or erect a fence around the critical root zone. Such tree protection shall remain in functioning condition until the certificate of occupancy is issued.

6. After lawfully receiving a land disturbance permit, Developer may undertake tree removal and grading activities within the construction area only. No grading activity shall be permitted in tree save areas.

B. Prior to the issuance of any building permit for the applicable development or phase of development, the following general steps shall be satisfied.

1. City Arborist shall inspect to determine whether Developer has impermissibly disturbed the tree save areas.

2. If Developer wishes to count trees in tree save areas towards satisfaction of the minimum tree density requirement under Section 15.38.090, landscaping requirements under Chapter 15.42 of this Title, or remove trees under 12 inches DBH in the tree save area, then Developer shall submit a tree survey, as prescribed under subsection 15.38.080.C, to the City Arborist of those trees in the tree save area Developer wishes to count towards either or both of the mentioned provisions and those non-pine species in the tree save area 12 inches DBH or greater. Said survey shall be prepared, certified, signed and sealed by a registered landscape architect. Developer shall mark those surveyed trees in the tree save area with a ring of blue colored water-based paint around the base of their trunks. To satisfy the landscaping requirements under said Chapter, the marked trees in the tree save area and preserved specimen trees shall be located on the same lot which is subject to said landscaping requirements.

3. After submission of the tree save area tree survey and prior to tree removal in a tree save area, City Arborist shall inspect the tree save areas for proper marking consistent with the tree save area tree survey.

4. If after inspection the City Arborist determines that

Developer has complied with the above requirements, the Developer may remove any trees in the tree save area under 12 inches DBH that are not to be counted toward compliance with the minimum tree density requirement under Section 15.38.090 or landscaping requirements under Chapter 15.42 of this Title. Also, the City Arborist shall sign-off on Developer's building permit for the applicable lot or area of the development.

C. Prior to the issuance of a certificate of occupancy for any lot the applicable development or phase of development, the following general steps shall be satisfied.

1. Developer shall plant those trees necessary to comply with the minimum tree density requirements under Section 15.38.090 and the landscaping requirements under Chapter 15.42 of this Title.

2. Developer shall submit to the City Arborist a plat of the lot indicating the location of any replacement trees and a document certifying that the particular lot in question contains the minimum tree density required under Section 15.38.090 and satisfies the landscaping requirements under Chapter 15.42 of this Title, both items signed and sealed by a registered landscape architect. Prior to the issuance of certificates of occupancy above eighty percent (80%) of those needed to complete the development or phase of development, Developer shall submit to the City Arborist a document prepared, signed and sealed by a registered landscape architect certifying that those portions or lots of the development or phase of development which will not need certificates of occupancy contain the minimum tree density required under Section 15.38.090 and satisfy the landscaping requirements under Chapter 15.42 of this Title. Such certifications shall contain calculations showing compliance with the required site density factor using existing trees, replacement trees, and/or contributions to the City of Locust Grove Tree Replacement Fund. (See density factor analysis, Appendix B.)

3. City Arborist shall inspect tree plantings and review the assertions of the Developer's registered landscape architect. If the City Arborist determines compliance with of the above requirements, City Arborist shall sign-off on Developer's certificate of occupancy for the applicable lot or area of development.

D. Following any inspection, the City Arborist shall advise the applicant of any recommended changes in the applicant's proposed tree removal, protection or planting plans necessary to make the plans comply with the provisions of this Chapter.

E. The City Arborist shall review all requests and supporting data and take one of the following actions: approve, approve with conditions or disapprove. Requests, which meet the requirements of this Chapter, shall be approved.

F. In no case shall a land disturbance permit, building permit, or certificate of occupancy be issued for a property upon which timber harvesting has occurred, with or without a permit, where such timber harvesting was completed within the last 18 months.

G. Except as provided in Section 15.38.100 of this Chapter authorizing certain limited cut and fill activities, the City Arborist may refuse to sign-off on any tree removal or land disturbance permit until the submission of all development plans and receipt of other evidence satisfactory to the City Arborist that there is a reasonable certainty that the development activity is imminent.

**Section 15.38.080. Integrated Site Plan and Tree Survey Submission Requirements.**

A. When a person applies for a land disturbance permit for active development, such person shall pay the administration fee as required under Section 15.38.140 to the City and file an integrated site plan and tree survey with the City Arborist providing the following information:

1. The species, location, health, size (DBH) and density unit value for specimen trees;
2. Site area, including location of existing and proposed utility property or easements, boring sites for underground utilities, and all structures, driveways and curb cuts and detention ponds;
3. A delineation of all tree save areas and construction areas;
4. All buffers required under the City zoning ordinance shall be delineated;
5. Property lines and phase lines if any for the development;
6. Water bodies and topographical lines sufficient to show elevation and drainage of land;
7. If applicable, details concerning any tree protection

devices or measures (such as fencing, tree wells, aeration systems, permeable paving, retaining walls, bollards, etc.);

8. The integrated site plan and tree survey shall be certified, signed and sealed by a registered landscape architect; and

9. Any additional information as required by the City Arborist as he or she deems necessary on a case-by-case basis.

B. Minor additions to existing development require only a sketch showing changes to be submitted to the City Arborist for review and approval.

C. The tree survey for tree save areas, as may be required in subsection 15.38.070.B.2, shall be also be integrated into the site plan for a particular lot certified, signed and sealed by a registered landscape architect noting the species, location, health, size (DBH) and density unit value of all trees within the tree save area as deep as is necessary to meet the minimum density requirements under Section 15.38.090 or landscaping requirements under Chapter 15.42 of this Title or to determine those trees to be preserved from tree removal.

#### **Section 15.38.090. Minimum Tree Density Requirements.**

A. All sites within the City, other than single-family residential lots, shall maintain a minimum tree density of twenty (20) units per acre. The term "unit" is an expression of basal area as defined herein and is not synonymous with "tree." Minimum tree density shall be calculated and established pursuant to the formula and analysis set forth in Appendix B to this Chapter. The Developer shall be subject to the minimum tree density requirement set forth in this section, but the Developer shall base its density calculations on the net site area excluding construction areas, except parking areas. For the purposes of this section, parking areas shall not be considered part of the construction area.

B. All newly constructed single-family residential lots in the City shall maintain a minimum tree density based upon the maximum number of trees that can be maintained within thirty percent (30%) of the lot's plantable area, taking into consideration the standards for tree size and separation - Overstory trees, 200 sq. ft. and Understory trees, 75 sq ft.

C. The minimum tree density requirement shall be met whether or not a site had trees prior to development. The density requirement may be achieved by counting existing trees to be preserved,

planting new trees in accordance with the minimum standards of this Chapter or some combination of the two. In addition, planting on such lots shall be at the ratio of not less than one (1) overstory tree (minimum two-inch caliper) for every three (3) understory trees (minimum one-inch caliper). No more than thirty percent (30%) of any one (1) genus may be included in any replanting plan.

D. Notwithstanding the foregoing, it is required that all reasonable efforts be made to save specimen trees. (Reasonable efforts shall include, but not be limited to, alternate building design, building location, parking area layout, parking area location, water detention location and the like.) Developers shall receive a density credit of two (2) times the assigned unit value for each specimen tree saved by utilizing an alternate design. Specimen trees that cannot be saved shall be replaced with trees having a total density equal to three (3) times the unit value of the tree removed with a minimum 4-inch tree caliper. Specimen trees removed without prior approval shall be replaced with trees equal to eight (8) times the unit value with a minimum 4-inch tree caliper and subject to the applicable penalties as described in Section 15.38.170.

E. The intent of this Chapter is to insure that a minimum density of trees is maintained on all developed sites. Occasionally, this intent cannot be met because a project site will not bear the required density of trees. To provide some alternatives in such cases, two (2) alternative methods of compliance may, at the discretion of the City Council, be approved: planting at a location remote from the project site; or, contributing to the City of Locust Grove Tree Replacement Fund.

1. The following standards have been established for administering these alternative compliance methods. The City Arborist shall review requests for alternative compliance and recommend to the City Council whether to approve or disapprove the request. In no instance will more than eighty percent (80%) of the required site density be met through alternative compliance. As many trees as can reasonably be expected to survive shall be planted on the site in question.

2. No certificate of occupancy for a development or phase of development shall be issued until the City Arborist has received the necessary documentation and/or funds and the City Council has approved the request. If trees are to be planted at another location, a plan indicating location, caliper, number and species of trees to be planted as well as schedule for completion of planting shall be submitted to the City Arborist for review and recommendation. The off-site location should be in the same area



of the City as the project site.

3. If the City Council chooses to accept a donation to the City of Locust Grove Tree Replacement Fund, the City Arborist shall establish the amount of the donation. The amount of the donation shall be based upon the number, size and species of trees that cannot be planted at the site. The City Arborist shall estimate the cost to the City for the materials, labor and 3-year maintenance requirements associated with the trees. The amount of the donation shall be one hundred percent (100%) of the estimated costs of the average of two (2) bids from reputable landscape contractors for the materials, labor and maintenance. The City shall use the funds for the purpose of planting trees on public property, which is preferred, for tree conservation education, landscaping public property or soil erosion minimization projects.

F. Documentation of compliance with this section, including tree density calculations described in Appendix B, shall be prepared, certified, signed and sealed by a registered landscape architect.

**Section 15.38.100. Land Disturbance Permit for Non-Active Developments**

A. Except as provided in paragraph B of this section, no tree removal shall be allowed or approved for any site not under active development. For the purposes of this Chapter, a site is not under active development unless there exists an approved development plan delineating the improvements to be constructed on the site consistent with the use for which the site is zoned, and there is a reasonable certainty that construction is imminent.

B. A land disturbance permit may be issued for grading activity on a site not under active development provided that all of the following requirements have been met.

1. The sole purpose of the grading activity is for the storage, removal or altering of soil for fill balancing on another site under active development.

2. The proposed grading activity shall not decrease the tree density below the minimum tree density for the site as calculated under subsection 15.38.090.A. For the purposes of this section, trees in buffers that will be required shall be excluded from minimum density calculations.

3. The area to be disturbed within the site shall be the area that will have the least adverse impact on existing trees, as determined by the City Arborist. In addition, the area shall be



visually screened from public roads and all adjacent properties by a one hundred foot (100') dense vegetative buffer along the perimeter of the property on which there will be land disturbance. In order to provide reasonable visual screening, it may be necessary to locate access roads to the impacted area in a winding manner to prevent a straight line of site to the impacted area. Planting of said buffer shall begin no later than thirty (30) days after tree removal or grading activities have begun and shall be complete no later than ninety (90) days thereafter.

4. The disturbed area within the site shall be replanted with trees to a tree density of twenty (20) units per acre no later than eighteen (18) months from the issuance of the land disturbance permit authorizing the grading activities. A tree replacement plan and a bond shall be submitted and approved by the City Arborist prior to the issuance of the permit authorizing the grading activities. The bond shall be in an amount equal to one hundred fifty percent (150%) of the estimated cost of the materials, labor and maintenance associated with the replanting. The bond shall be held for one (1) year and to the end of the succeeding planting season to ensure survival of the replacement trees. The applicant shall be responsible for the irrigation (watering) of trees during the period of the bond. The replanting requirements of this section shall not apply and the bond shall be released, if, on or before fifteen (15) months from the issuance of the permit authorizing the grading activity, the site becomes under active development pursuant to the issuance of a land disturbance permit and the approval of development plans in compliance with the provisions of this Chapter.

C. Nothing in this section shall be deemed to authorize any grading activity or similar activity not otherwise in compliance with the City Subdivision Ordinance including the City Soil Erosion and Sedimentation Control Ordinance. Further, nothing in this section shall be deemed to eliminate the requirement that all reasonable efforts shall be taken to save and to not adversely impact the critical root zones of specimen trees and that all applicable sites from the City shall maintain or obtain the minimum tree density required by this Chapter.

#### **Section 15.38.110. Tree Damage.**

Any tree designated in the plan to be saved that is damaged during construction or as a result of such construction shall be treated according to accepted National Arborist Association Standards or replaced with a tree(s) equal to the unit value of the tree damaged beyond treatment. However, any specimen tree damaged as described above shall be replaced with a tree(s) eight (8) times the unit

value of the tree removed with a minimum 4-inch tree caliper. In the event that a damaged specimen tree shall be removed, the location occupied by the tree's critical root zone shall remain in a pervious state with no structures or buildings placed in this area and violations shall be subject to the applicable penalties as described in Section 15.38.170.

**Section 15.38.120. Tree Planting Standards.**

A. Unless otherwise documented, signed and sealed by a registered landscape architect or approved by the City Arborist, trees selected for planting shall be on the tree planting list. (See Appendix A.) Trees selected for planting shall be free from injury, pests, disease, nutritional disorders or root defects, and shall be of good vigor in order to assure a reasonable expectation of survivability. Standards for transplanting shall be in keeping with those established in the International Society of Arboriculture publication "Tree and Shrub Transplanting Manual" or similar publication. Reference the American Association of Nurserymen publication "American Standard for Nursery Stock" (ANSI Z60, 1973) for plant material quality specifications. Reference the "Manual of Woody Landscape Plants" (Michael Dirr, 1983, Castle Books, or later editions) or similar publication for information on tree species site requirements.

B. It is desirable that planted trees be ecologically compatible with the site and neighboring sites. Accordingly, the replanted trees shall be of the same or similar species as those removed when practical.

C. All planted overstory trees shall be at least six feet (6') tall and have a trunk of not less than two (2) caliper inches. All replanted understory trees shall be at least four feet (4') tall or have a trunk not less than one (1) caliper inch. In order to provide sufficient growing area for planted trees, the following minimum criteria shall be observed unless otherwise approved by the City Arborist:

Overstory trees - 200 square feet of pervious root zone

Understory trees - 75 square feet of pervious root zone

(However, up to thirty (30) percent of critical root zone may be impervious area)

D. Planted trees shall be placed in areas so as to maximize their benefits, such as shade for single-family residential structures, streets or parking lots; augment the minimum depth of buffers

around commercial or industrial activities; or soil erosion prevention on slopes.

E. At Developer's discretion, planted trees under this section may be applied to the minimum landscaping requirements under Chapter 15.42 of this Title to the extent such planted trees are located on a lot or area subject to said landscaping requirements.

F. Compliance with this section shall be documented, signed and sealed by a registered landscape architect.

**Section 15.38.130. Tree Removal Compliance Inspection.**

A. Following the issuance of a land disturbance permit for the development site, the City Arborist shall from time to time inspect the site for the purpose of certifying compliance with the requirements of the Chapter. In the event of noncompliance, the City Arborist may revoke or modify any City permit pertaining to the development activity for which the land disturbance permit has been issued. No certificate of occupancy shall be issued until actual compliance is obtained.

B. If any required land disturbance permit conditions have not been met within the time specified in the land disturbance permit, and provided the City Arborist has not granted a written extension, the City may use the cash or bond proceeds to insure that these conditions are met. The bond will have an expiration date no longer than one (1) year, and the proceeds will go to the City of Locust Grove Tree Replacement Fund under subsection 15.38.090E.

C. After development is complete, the City Arborist shall continue to make random inspections to insure that required trees are maintained. Replacement shall be required or bond/letter of credit posted within thirty (30) days of notice by the City Arborist should any of these trees die, be removed or be destroyed within two (2) years after completion of development.

D. Notwithstanding any other provision of this Chapter to the contrary, a Developer's responsibility to replace a newly planted tree or trees on a particular lot shall terminate one year after the issuance of a certificate of occupancy for that lot provided that an inspection by the Developer or his designee conducted immediately prior to the issuance of the certificate of occupancy confirms that the planted tree or trees were planted properly as established in the ISA (International Society of Arboriculture) standards, and are healthy and free of pests and disease. Nothing in this Chapter shall be deemed to eliminate any other obligation the Developer may have pursuant to any private agreement between

the Developer and subsequent landowner or tenant, or any restrictive covenants that are applicable to the property.

**Section 15.38.140. Permit Fees.**

The fee for review of all documents required under this Chapter and inspections shall be fifty dollars (\$50.00) per acre not to exceed a maximum of five hundred dollars (\$500.00). These fees may be revised from time to time by resolution of the City Council, or delegated to the City Arborist to be administratively established and revised from time to time. Such fees shall be paid to the City.

**Section 15.38.150. Enforcement; Appeals and Variances.**

A. *Enforcement.* The City Arborist shall be primarily responsible for the administration and enforcement of the provisions of this Chapter. All requests for approval letters and all documentation or tree removal shall be submitted to and reviewed by the City Arborist. The City Arborist shall be responsible for recommending the approval or denial of applications for land disturbance permits.

B. *Appeals.*

1. Written requests for appeal of any administrative decision are permitted and shall be submitted to the Board of Appeals within ten (10) days after notice of such decision. Such ~~written appeal shall be made in the form of a letter which outlines~~ the salient points upon which the appeal is based.

2. The Board of Appeals shall schedule a hearing as soon as reasonably practicable to consider the appeal, and shall issue a written decision within thirty (30) days of the hearing.

3. If the appeal concerns an administrative decision regarding specimen trees, it shall be the applicant's burden to demonstrate that reasonable alternatives (as described in subsection 15.38.090D, herein) have been considered in order to save specimen trees. Documented evidence shall be filed by the applicant with the written request for appeal and shall include, but not be limited to the following:

a. Integrated site plan and tree survey as required under Section 15.38.080.

b. Two (2) alternative development plans, which include the specimen tree(s).

c. An itemized estimate of additional costs associated with saving the tree(s).

C. Variance.

1. Written requests for a variance are permitted.

2. The City Arborist shall have the authority, but is not required to exercise such authority, to grant variances not to exceed twenty percent (20%) of the minimum or maximum standards of this Chapter.

3. Variance requests, not acted upon by the City Arborist, shall be ruled on by the Board of Appeals in writing and shall be issued no later than thirty (30) days after a request is reviewed.

4. Variances can be granted only in the case of extreme hardship or unusual circumstance. The factors to be taken into consideration shall include, but not limited to, the following:

a. The ease with which the applicant can alter or revise the proposed development or improvement to accommodate existing trees.

b. The economic hardship that would be imposed upon the applicant were the variance denied.

c. The heightened desirability of preserving tree cover in densely developed or densely populated areas.

d. The need for visual screening in transitional zones or relief from glare, blight, commercial or industrial unsightliness or any other visual affront.

e. Whether the continued presence of the tree or trees is likely to cause danger to a person or property.

f. Whether the topography of the area in which the tree is located is of such a nature to be damaging or injurious to trees.

g. Whether the removal of the trees is for the purpose of thinning a heavily wooded area where some trees will remain.

h. Whether tree removal would have an adverse impact upon existing biological and ecological systems.

i. Whether tree removal would affect noise pollution by

increasing source noise levels to such a degree that a public nuisance may be anticipated or a violation of the noise control ordinance will occur.

D. *Appeals from decisions of the Board of Appeals.* Appeals from decisions by the Board of Appeals shall be by writ of certiorari to the Henry County Superior Court, and must be filled within thirty (30) days of the date of the board's decision.

#### **Section 15.38.160. Non-Liability of City.**

Nothing in this Chapter shall be deemed to impose any liability upon the City or upon any of its officers or employees or to relieve the owner and occupant of any private property from the duty to keep trees and shrubs upon private property or under its his control in a safe condition.

#### **Section 15.38.170. Penalties.**

A. A violation of this Chapter shall constitute a misdemeanor punishable by a fine of up to one thousand dollars (\$1,000.00) and/or a sentence of up to thirty (30) days incarceration per day per occurrence. Nothing herein shall prevent the City from taking such other lawful action as is necessary to prevent or remedy any violations. Replacement shall also be required.

B. In the event that a specimen tree is damaged or removed in violation of this Chapter, violators shall be subject to replace specimen trees with trees having a total density equal to eight (8) times the unit value of the tree removed with a minimum four-inch (4") tree caliper. Furthermore, the location and extent of the tree's critical root zone shall permanently remain in a pervious state with no structures or buildings placed on it.

C. In addition to A and B, upon notice from the City Arborist, work on any development that is being done contrary to the provisions of this Chapter shall immediately cease. The stop-work notice shall be in writing and shall go to the owner of the property, or to his agent, or to the person doing the work, and shall state the conditions under which work may be resumed. When an emergency exists, the City Arborist shall not be required to give written notice prior to stopping the work. Further, in the event that work on any development is being done contrary to the provisions of this Chapter, the City Arborist may revoke any permit pertaining to the development activity for which the Land Disturbance Permit has been issued and may refuse to issue any further permit until, at the discretion of the City Arborist, the work on the development is brought into compliance with the

provisions of this Chapter.



**APPENDIX A**  
**RECOMMENDED SPECIES LIST OF OVERSTORY TREES**

<b>Scientific Name</b>	<b>Common Name</b>
Acer barbatum	Southern Sugar Maple
Acer floridanum	Florida Maple
Acer rubrum	Red Maple and improved hybrids
*Acer saccharum	Sugar maple
*Betula nigra	River Birch
*Carya illinoensis	Pecan
*Carya ovata	Shagbark Hickory
*Castanea mollissima	Chinese Chestnut
*Cunninghamia lanceolata	Common Chinafir
*Fagus grandifolia	American Beech
Fraxinus pennsylvanica	Green Ash
Ginkgo biloba	Ginko, grafted (male only)
*Juniperus virginiana	Eastern Red Cedar
*Liquidambar styraciflua	Sweetgum
*Liriodendron tulipifera	Yellow-poplar
*Magnolia grandiflora	Southern Magnolia
Metasequoia glyptostroboides	Dawn Redwood
Nyssa aquatica	Swamp Tupelo
Nyssa sylvatica	Black Gum
Oxydendrum	Sourwood
*Pinus elliotii	Slash Pine
*Pinus strobus	White pine
*Pinus taeda	Loblolly Pine
*Pinus virginiana	Virginia Pine
*Platanus occidentalis	American Sycamore
Quercus acutissima	Sawtooth Oak
Quercus alba	White Oak
Quercus coccinea	Scarlet Oak
Quercus falcata	Southern Red Oak
Quercus nigra	Water Oak
Quercus phellos	Willow Oak
Quercus palustris	Pin Oak
Quercus prinus	Chesnut Oak
Quercus shumardi	Shumard Oak
Sophora japonica	Japanese Pagodatree
Taxodium disticum	Bald Cypress
Ulmus parvifolia	True Chinese Elm
Zelkova serrata	Japanese Zelkova

\*Indicates not suitable for parking lot islands.

# RECOMMENDED SPECIES LIST OF UNDERSTORY TREES

Scientific Name	Common Name
Acer buergerianum	Trident Maple
Amelanchier arborea	Serviceberry
Carpinus caroliniana	American Hornbeam, Musclewood
Cercis canadensis	Eastern Redbud
Cercis chinensis	Chinese Redbud
Chionathus virginicus	Fringe Tree, Grancy Graybeard
Cotinus coggygria	Common Smoketree
Crataegus phaenopyrum	Washington Hawthorne
Cupressocyparis leylandii	Leyland Cypress
Cryptomeria japonica	Japanese Cryptomeria
Halesia carolinia	Silverbell
Ilex x attenuata	Savannah Holly
Ilex decidua	Decidious Holly
Ilex x Nellie R. Stevens	Nellie R. Stevens Holly
Ilex x opaca	American Holly
Ilex vomitoria	Yaupon Holly
Koelreuteria bipinnata	Bougainvillea Goldenraintree
Koelreuteria paniculata	Panicled Goldenraintree
Lagerstroemia hybrids	Crapemyrtle improved hybrids
Maclura pomiera	Osage--orange
Magnolia virginiana	Sweetbay Magnolia
Magnolia x soulangiana	Saucer Magnolia
Magnolia stellata	Star Magnolia
Malus species	Flowering Crabapple
Myrica cerifera	Waxmyrtle
Ostrya virginia	Ironwood, Carolina Hornbeam
Oxydendrum aboreum	Sourwood
Pistachia chinensis	Chinese Pistache
Sassafras albidum	Sassafras
Vitex agnus-castus	Chastetree

**APPENDIX B**  
**TREE DENSITY CALCULATION**

A basic requirement of the Tree Conservation and Replacement Ordinance is that all applicable sites maintain a minimum tree density of 20 units per acre. The term "unit" is an expression of the Basel area (a standard forest inventory measurement), and is not synonymous with "tree".

This density requirement shall be met whether or not a site had trees prior to development. The density may be achieved by counting existing trees to be preserved, planting new trees, or some combination of the two as represented by the formula.

$$\text{SDF} - \text{EDF} = \text{RDF}$$

Where:

SDF (Site Density Factor)-the minimum tree density required to be maintained on a developed site (units per acre).

EDF (Existing Density Factor)-Density of existing trees to be preserved on a site.

RDF (Replacement Density Factor)-Density of new trees to be planted on a site.

The SDF is calculated by multiplying the number of acres by the minimum tree density requirements.

EXAMPLE: A 2.2 acre site has a SDF of  $2.2 \times 20 = 44$

The EDF is calculated by converting the diameter of individual trees to density factor units. Table A below does this.

EXAMPLE: A total of 15 trees will remain on the 2.2 acre site. The tree inventory is as follows:

- 7 - 12 inch diameter pines
- 3 - 14 inch diameter pines
- 3 - 18 inch diameter pines
- 1 - 21 inch diameter hickory
- 1 - 30 inch diameter oak

Converting diameters (DBH) to density units, the EDF is determined as follows:

DBH	DENSITY UNIT VALUE		NO. OF TREES	SUBTOTALS
12 inch	0.8	X	7	5.6
14 inch	1.2	X	3	3.6
18 inch	1.8	X	3	5.4
21 inch	2.6	X	1	2.6
30 inch	4.4	X	1	4.4
			<b>Total EDF</b>	<b>21.6</b>

The RDF is calculated by subtracting the EDF from the SDF.

EXAMPLE:  $RDF = 44 - 21.6 = 22.4$

In this example, the site would require replacement trees of 22.4 density credits.

The density credit for each caliper size of replacement (new) trees is shown in TABLE B. Following TABLE B are tree replacement requirements.

**TABLE A**

***Conversion of Tree Diameters (DBH) to Density Factor Units***

<b>Tree Size (DBH)</b>	<b>Unit Value</b>
2"	0
3"	0
4"	.1
5"	.1
6"	.2
7"	.2
8"	.4
9"	.4
10"	.6
11"	.6
12"	.8
13"	.8
14"	1.2
15"	1.2
16"	1.8
17"	1.8
18"	1.8
19"	1.8
20"	2.6
21"	2.6
22"	2.8
23"	2.8
24"	3.4
25"	3.4

Tree Size (DBH)	Unit Value
26"	3.8
27"	3.8
28"	4.0
29"	4.0
30"	4.4
31"	4.4
32"	4.6
33"	4.6
34"	5.0
35"	5.0
36"	5.4
37"	5.4
38"	5.8
39"	5.8
40"	6.2
41"	6.2
42"	7.0
43"	7.0
44"	8.0
45"	8.0
46"	9.0
47"	9.0
48" inches or greater	10.0

Note: DBH is rounded to nearest inch (.5 and higher is rounded up to next full inch, .4 and lower is rounded down to lower full inch).

Note: Values for tree sizes 24 inch and greater are for trees that do not qualify as Specimen Trees and are not subject to Specimen Tree designation under Appendix C. Trees qualifying as Specimen Trees are subject to the benefits and restrictions of this Chapter.

**TABLE B**

***Conversion of Replacement Tree Caliper to Density Credits***

Caliper Size (at twelve (12) inches height)	Density Credit	Number of Trees Required to Meet Twenty (20) Units/Acre Standard (1)
1	0	N/A
2	.4	50
3	.5	40
4	.6	33
5	.7	29
6	.8	25
7	1.0	20
8	1.1	19
Greater than 8	1.1	19

**Note:** This column represents the number of trees that would need to be replanted if all one-size tree was used. This is provided for information purposes only, as it is likely that a variety of tree sizes would be used.

**Tree Replacement Requirements:**

(1) No more than thirty (30) percent of all trees planted for replacement density credit may be of any one (1) species.



(2) No more than ten (10) percent of all trees planted for replacement density credit may be pine trees.

(3) Seven (7) gallon pine trees to be planted to meet required replacement densities shall be a least one (1) inch in caliper and greater than or equal to four feet (4') tall.

(4) Specimen tree replacement/recompense trees shall be at least 4-inch caliper.

(5) No more than twenty (20) percent of all trees planted for replacement density credit may be under 2-inch caliper.

## APPENDIX C SPECIMEN TREES

Some trees on a site warrant special consideration and encouragement for conservation. These trees are referred to as specimen trees.

The following criteria are used by the City Arborist to identify specimen trees. Both the size and condition criteria shall be met for a tree to qualify.

### *Size Criteria*

Trees, exclusive of conifer trees: 24-inch diameter or larger

### *Condition Criteria*

Greater than fifteen (15) years life expectancy.

Trunk is relatively sound and solid with no extensive decay.

No more than one (1) major and several minor dead limbs (hardwood trees only).

No major insect or pathological problem.

In order to encourage the conservation of specimen trees and the incorporation of these trees into the design of projects, additional density credit will be given for specimen trees, which are successfully saved by a design feature specifically designated for such purpose. Credit for any specimen tree thus saved would be two (2) times the assigned unit value shown in Appendix B. The critical root zone of specimen trees will be protected with hog-back/wire-back tree save fencing with metal support posts.

If a specimen tree is to be removed, a plan or written documentation indicating the reason for the removal shall be submitted to the City Arborist.

Specimen trees that cannot be saved (see subsection 15.38.090D) shall be replaced with trees having three (3) times the unit value of the tree removed with a minimum 4-inch tree caliper by species with potentials for comparable size and quality.

Any specimen tree which is removed without the appropriate review and approval of the City Arborist shall be replaced by

trees with a total density equal to eight (8) times the unit value of the tree removed with a minimum 4-inch tree caliper. Size alone will determine whether a tree was of specimen quality if the tree is removed without approval and there is no evidence of its condition. Violations will be subject to the applicable penalties as described in Section 15.38.170.

**APPENDIX D**  
**TIMBER HARVEST PERMITTING**

Tree cutting, clearing, or clearing and grubbing projects, which result in the sale of timber, shall conform to state law regarding payment of taxes. A Georgia Department of Revenue Form PT-283T, along with the required payment, shall be submitted to the Henry County Tax Assessor's Office within the time frame prescribed by law. Failure to do so shall be considered a violation of the City Erosion and Sedimentation Control Ordinance as well as the tax law. Call the Henry County Tax Assessor's Office for more information.

- Provided documentation regarding the type of timber sale, estimated date of purchase, and estimated PT-283T submittal date when submitting plans to the Engineering Public Works Department for review.

Applications for tree cutting, clearing, or clearing and grubbing shall be in accordance with current land disturbance permit plan review procedures.

Plans and other supportive documents submitted for a land disturbance permit for tree cutting in areas greater than five (5) acres shall bear the signature of a registered forester.

The minimum size of plans shall be 11 x 14 inches. The maximum size shall be 24 x 36 inches.

Plans shall include the following information:

- Owner's name, address and phone number
- Consultant's and Contractor's names, addresses and phone numbers.
- Location / vicinity map
- Land Lot(s) and District(s)
- North Arrow
- Scale (minimum 1" = 100')

- Closed property boundary showing bearings and distances of all property lines
- Current zoning of property
- Current zoning of adjacent properties
- Total acreage of property and approximate acreage of area to be disturbed
- 24 hour emergency contact name and phone number(s) in bold type (no smaller than 20 point type)
- Names of adjoining roadways
- Location of and detail for the trunk exit (Co or crushed stone pad)
- Approximate location of the following land features:
  - ▶ All state waters
  - ▶ Topography at 20 ft intervals (U.S.G.S. Quadrangle Map)
  - ▶ Forest cover areas
  - ▶ 100-year floodplain
  - ▶ Wetlands
- Limits of land disturbance
- Approximate locations and dimensions of any logging decks
- Location of any state water buffers (dimension 25 ft undisturbed zones from the top of each bank)
- Location of Streamside Management Zone (dimension required width)
- Approximate locations of any haul roads
- Approximate locations of any stream crossings showing approximate width of crossing (bank to bank) and method of sediment control (rock riprap or culvert)

- Approximate locations of any historical features including cemeteries; or, a note indicating the absence of such on the site
- Delineation and labeling of any required buffer zones around the perimeter of the property
- A detail of the method to be used to delineate all buffers on the site
- Expected time frame in which the operation will occur
- Additional information as may be required by the planning department to perform a proper review of the project and assure that the intent of the Soil and Erosion and Sediment Control Ordinance is met

The Following Notes:

- The building department reserves the right to require additional erosion and sedimentation control measures deemed necessary.
- The contractor shall implement all Best Management Practices for forestry as prescribed by the Georgia Forestry Commission and the U.S. Environment Protection Agency.
- No trees may be cut in buffer zones marked "undisturbed." Tree cutting shall be limited to the non-mechanical removal of pine (*Pinus* spp.) Or yellow-poplar (*Liriodendrom tulipifera*) trees with stump diameters greater than fifteen (15) inches; provided that a minimum of fifty square feet (50 sq.ft.) of basal area remains in good condition in the buffer area at completion of the project. The non-mechanical removal of dead, diseased or insect infested trees is also allowed in this buffer (subject to verification by the City of Locust Grove Arborist).
- All buffers of state waters shall remain undisturbed except for haul road crossing points.
- Projects, which are restricted to a "Residential Thinning", shall leave a minimum density of thirty square feet (30 sq.ft.) of basal area throughout all area not designated as buffers or logging decks. Trees in buffers shall be preserved and undisturbed. Trees to be preserved